

LETTERS TO EDITOR

In Reference to “A Novel Configuration of a Traditional Rapid Response Team Decreases Non-Intensive Care Unit Arrests and Overall Hospital Mortality”

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The impact of rapid response teams (RRTs) on preventing non-intensive care unit (ICU) cardiopulmonary arrests (CPA) and decreasing in-hospital mortality is a complex issue that goes beyond the structure of RRTs. The success of RRTs depends upon institutional culture, resources, RRT structure, hospital size, and expertise. These are some of the major reasons RRTs have failed to show benefit consistently across the board, because not all institutions are able muster enough resources, reasonable nurse-to-patient ratio, advanced ongoing training, and easily accessible onsite intensivists or physicians. An institutional culture where nurses and ancillary staff do not feel intimidated or retaliated on for calling “unnecessary” RRT codes is extremely important for the success of any RRT program. We have observed at our institution and others where just improvement in culture reduced non-ICU CPAs, although it also led to a higher number of RRT codes. As a hospitalist leader of RRTs for many years, it sometimes felt as if “unwarranted” RRT codes were overwhelming already busy hospitalists. However, the real improvement in patient mortality and morbidity reminded us of the importance of creating an open and stress-free environment for the nurse responsible for initiating RRTs. Davis et al.’s novel RRT program showed improvement in non-ICU CPAs and in-hospital mortality.¹ The researchers and their institutions did a great job in improving outcomes, perhaps by devoting enough resources and creating a positive work environment for the nursing staff.

A large observational study conducted in 9 European countries showed that an increase in a nurses’ workload by 1 patient increased the likelihood of a hospitalized patient dying within 30 days of admission by 7%. Furthermore, every 10% increase in nurses with a bachelor’s degree was associated with a decrease in this likelihood by 7%.² Nursing staff can activate RRTs in a timely fashion if they are not overworked or undertrained. Additionally, having an intermediate-care unit for the patients who do not quite meet the ICU criteria and yet require more intensive care has been shown to decrease in-hospital mortality.³ A study by Ghaferi et al. showed that sur-

vival after in-hospital complications following pancreatic resection was high in hospitals with teaching status, those with a size greater than 200 beds and average daily census greater than 50% capacity, increased nurse-to-patient ratios, and high-level hospital technology.⁴ Therefore, there are many factors that could have had an impact on in-hospital mortality in this study.¹ It will be interesting to know if there was a difference in the novel RRT’s success rates in the primary medical center and smaller sister campus in the study by Davis et al.¹ Activation of RRTs based on the change in vital signs is challenging for the elderly.⁵ Therefore, geriatrics-unit staff need special training for RRTs to be successful.

In the study by Davis et al., the charge nurse on each inpatient unit conducted rounds on at-risk patients throughout each shift.¹ Additionally, the charge nurse responded to each RRT code and received intensive training. This strategy may have contributed to the benefit shown by the novel RRT strategy. However, most community hospitals are struggling to maintain adequate nurse-to-patient ratios due cost constraints, and adding a significant burden to the already busy charge nurse’s responsibilities is difficult to sustain for some institutions. Having a highly trained, dedicated, multidisciplinary team is likely to improve outcomes, but more sustainable solutions for smaller community hospitals are needed. As this study has demonstrated, devoting more resources to patients may pay off over time. The public and private payers should also recognize this as a quality-of-care indicator and reward hospitals making improvements in this arena.

References

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